Volunteer Lake Assessment Program Individual Lake Reports

Snake River, New Hampton/Center Harbor

2014 Data Summary

Observations and Recommendations (*Refer to Table 1 and Historical Deep Spot Data Graphics)*

- **Conductivity/Chloride:** Conductivity and chloride generally increased from May to September at each station and also increased from upstream (Site 4) to downstream (Site 1) in 2014. Conductivity and chloride levels were slightly greater than the state medians but not above a level of concern. Historical trend analysis indicates significantly decreasing (improving) conductivity levels since 2002. We hope to see this continue!
- **Total Phosphorus:** Phosphorus remained stable from May to September at Sites 2 and 5, however phosphorus levels increased from May to September at Sites 1, 3 and 4. Average phosphorus levels remained low at all stations and increased slightly from upstream (Site 4) to downstream (Site 1). Historical trend analysis indicates relatively stable phosphorus levels with moderate variability between years.
- **Turbidity:** Turbidity levels in May were slightly higher than normal at Sites 1, 2, 3 and 5, however were normal at Site 4. Turbidity levels decreased in August at all sites and then increased slightly in September at Sites 2 and 3. Average turbidity levels generally increased from upstream (Site 4) to downstream (Site 1).
- **pH:** pH levels were generally higher (better) in May and then decreased slightly by September. Average pH levels were within the desirable range 6.5-8.0 units at all stations except Site 1. Historical trend analysis indicates relatively stable pH levels with moderate variability between years.
- **Recommended Actions:** The improving conductivity trend is a great sign and we hope to see this continue in the river. Water quality is generally stable at all stations and within low to average ranges for New Hampshire lakes. A beaver dam was present below Site 4 which likely accounts for the difference in water quality from upstream to downstream. Keep up the great work!

Station Name	Table 1. 2014 Average Water Quality Data for SNAKE RIVER				
	Chloride mg/l	Cond. uS/cm	Total P ug/l	Turb. ntu	pH
Site 1	14	74.0	8	0.97	6.38
Site 2	12	71.2	7	0.81	6.57
Site 3	12	71.5	8	0.87	6.53
Site 4	11	64.3	6	0.61	6.74
Site 5	13	70.2	8	0.74	6.63

NH Median Values: Median values for specific parameters generated from historic lake monitoring data.
Alkalinity: 4.9 mg/L
Chlorophyll-a: 4.58 mg/m^3
Conductivity: 40.0 uS/cm
Chloride: 4 mg/L
Total Phosphorus: 12 ug/L
Transparency: 3.2 m
pH: 6.6

NH Water Quality Standards: Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.
Chloride: > 230 mg/L (chronic)
E. coli: > 88 cts/100 mL – public beach
E. coli: > 406 cts/100 mL – surface waters
Turbidity: > 10 NTU above natural level
pH: between 6.5-8.0 (unless naturally occurring)

Historical Water Quality Trend Analysis